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John C Bowman* (bowman@ualberta.ca), Department of Mathematical Sciences, University of Alberta, Edmonton, Alberta T6G 2G1, Canada, and **Pedram Emami**. *On the Global Attractor of 2D Incompressible Turbulence with Random Forcing and Friction.*

We revisit bounds on the projection of the global attractor in the energy–enstrophy plane obtained by Dascaliuc, Foias, and Jolly [2005, 2010]. In addition to providing more elegant proofs of some of the required nonlinear identities, the treatment is extended from the case of constant forcing to the more realistic case of random forcing. Numerical simulations in particular often use a stochastic white-noise forcing to achieve a prescribed mean energy injection rate. The analytical bounds are illustrated numerically for the case of white-noise forcing. In most numerical studies of 2D turbulence, an artificial friction term is added to drain energy from the inverse cascade. We investigate the effect of this additional term on the projection of the global attractor. (Received August 07, 2018)